

WHAT IS CLAIMED IS:

1. A semiconductor device, comprising
a bottom lead frame;
a die attached on the bottom lead frame;
a top finger attached to said die, wherein said top finger has a groove, wherein the groove is provided at a bottom surface of said top finger and adjacent to a contact position between said top finger and said die; and
a molding compound for molding the semiconductor device.
2. The semiconductor device of Claim 1, wherein said top finger is attached to said die with a conductive material.
3. The semiconductor device of Claim 2, wherein said conductive material is solder.
4. The semiconductor material of Claim 2 wherein the groove in said top finger contains conductive material that flowed into the groove upon attaching said top finger to said die.
5. The semiconductor material of Claim 1, wherein the groove is a U-groove.
6. The semiconductor material of Claim 1, wherein the groove is a V-groove.
7. The semiconductor device of Claim 1, wherein the semiconductor device is a rectifier.
8. The semiconductor device of Claim 1, wherein the groove is located closer to a point of contact between said top finger and the die than a passivation ring of the die.

9. A lead frame for a semiconductor device, the lead frame comprising
a finger portion having a top surface and a bottom surface, wherein the bottom surface
includes a groove cut therein; and
a die-attached portion for attaching a die thereon,
wherein the groove provided in a bottom surface of said finger portion is adjacent to a
contact position between said finger portion and the die.
10. The lead frame of Claim 9, wherein the groove is a U-groove.
11. The lead frame of Claim 9, wherein the groove is a V-groove.
12. The lead frame of Claim 9, wherein said finger portion is attached to said die with a
conductive material.
13. The lead frame device of Claim 12, wherein said conductive material is solder.
14. The lead frame of Claim 12, wherein the groove in said finger portion is configured to
receive any conductive material overflow when said finger portion is attached to said die
with a conductive material.
15. The lead frame of Claim 9, wherein the semiconductor device is a rectifier.